

Summary of Linkage Projects Applications for Funding to Commence in 2006

South Australia

University of South Australia

LP0669479 Dr D Chung; Dr PJ O'Leary

Approved Project Title **Stopping domestic violence in urban and rural areas: evaluating and improving the effectiveness of domestic violence perpetrator programs.**

2006 : \$29,199

2007 : \$58,399

2008 : \$58,399

2009 : \$29,199

Primary RFCD 3702 SOCIAL WORK

APA(I) Award(s): 1

Partner Organisation(s)

CJS Training Unit

Administering Institution University of South Australia

Project Summary

Domestic violence affects up to 36% of women (Mouzos et.al 2004). Its annual economic cost is \$8.1b (Access Economics 2004). In 66% of cases children are present (Bagshaw et.al 1999). Effects on women and children are poor mental health, homelessness and impaired work/education performance (VicHealth 2004). As male perpetrators tend to be serial offenders (Hansen et al 2004), there are Australian programs to stop the violence. There are limited and contentious findings about their value and no published evaluation of programs in rural Australia. This research addresses these significant knowledge gaps and is nationally beneficial as the knowledge can ultimately reduce domestic violence prevalence.

LP0669326 A/Prof AR Gerson; Mr MA De Vos; Dr MC Barnes

Approved Project Title **Development of Dry Coated Pigment Particles: Durability and Dispersion**

2006 : \$40,000

2007 : \$85,000

2008 : \$75,000

2009 : \$30,000

Primary RFCD 2501 PHYSICAL CHEMISTRY (INCL. STRUCTURAL)

Partner Organisation(s)

Tiwest Joint Venture

Administering Institution University of South Australia

Project Summary

Tiwest is the only business in the world that mines, separates, refines and manufactures titanium dioxide products in one region. Tiwest has a major impact on the Western Australian economy with more than 700 full time and contract jobs, export earnings of \$400M (in 2004) and regular incomes for an estimated 500 businesses. The current wet pigment particle coating process, to ensure ease of handling and longevity, is a major cost. An optimised pigment dry-coating process would ensure Tiwest's competitiveness through reduced processing costs and improved performance. This development has the potential to increase Tiwest's profitability by 10%.

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LP0669600 A/Prof SR Grano; A/Prof D Fornasiero; Dr GE Morris

Approved Project Title **Optimising the Recovery of Fine and Coarse Particles in Mineral Flotation**

2006 : \$77,500
2007 : \$132,500
2008 : \$105,000
2009 : \$105,000
2010 : \$55,000

Primary RFCD 2907 RESOURCES ENGINEERING

APA(I) Award(s): 4

Partner Organisation(s)

AMIRA International

Administering Institution University of South Australia

Project Summary

The collection of fine (<10 microns) and coarse (>100 microns) mineral particles by gas bubbles is the very heart of the selective froth flotation process. In the flotation of minerals, losses of fine and coarse value minerals equate to approximately \$500M annually in Australia alone. The significance of flotation to the Australian economy may be judged from the fact that over \$39b in commodity exports was derived from the minerals and energy industries in 2001, rising to well over \$75b in 2005 (Australian Bureau of Statistics). These industries produce mineral concentrates of specific interest to our Industry Partner, such as copper, nickel, zinc and coal.

LP0669085 Dr AJ Hariz; Dr H Hsu; Dr T Omari

Approved Project Title **Development of a novel flex sensor for use on catheters in medical pressure diagnostic tools**

2006 : \$12,325
2007 : \$24,650
2008 : \$24,650
2009 : \$12,325

Primary RFCD 2909 ELECTRICAL AND ELECTRONIC ENGINEERING

APA(I) Award(s): 1

Partner Organisation(s)

Centre for Paediatrics and Adolescent Gastroenterology, Women's and Children's Hospital

Administering Institution University of South Australia

Project Summary

This research project will lead to a significant improvement on the technologies currently available to diagnostic tests of swallowing dysfunctions in children. The proposed technology is much needed and will enable future development of more direct and targeted interventions to assist with feeding based on these measurement techniques. In addition, the knowledge and expertise learned from this project as applied to such a miniature medical device comprises sufficient generic know-how to be useful in developing other biomedical devices. These developments will have a tangible technological impact in a way that will help the Australian biomedical industry be more competitive in the global market.

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LP0668944 A/Prof AJ Liddicoat; Ms A Scarino; Dr A Mercurio

Approved Project Title **Assessing the intercultural in language learning**

2006 : \$25,000

2007 : \$52,500

2008 : \$55,000

2009 : \$27,500

Primary RFCD 3802 LINGUISTICS

Partner Organisation(s)

School of Languages

Senior Secondary Assessment Board of South Australia

Department of Education and Children's Services

Administering Institution University of South Australia

Project Summary

The implementation of Intercultural Language Learning (ICLL) is a priority in policy for the Commonwealth and States and is important in developing better understanding of people from different cultures and countries. A key problem is the development of assessment models. This project is a first investigation of the process and theory of task-based assessment in ICLL and of the process of judgement in assessing languages and interculturality. The project will contribute to the quality of languages education nationally by enhancing languages teaching and learning and especially the contribution of languages learning to understanding, respecting and engaging with linguistic and cultural diversity, both in Australia and globally.

LP0669781 Prof IC McMillen; Dr VE Perry

Approved Project Title **Early Nutrition and the Programming of Body Composition in Cattle**

2006 : \$25,000

2007 : \$50,000

2008 : \$50,000

2009 : \$25,000

Primary RFCD 2706 PHYSIOLOGY

Partner Organisation(s)

Australian Agricultural Company

Administering Institution University of South Australia

Project Summary

Australia is the world's largest beef exporter with the net value of beef export valued at \$4.6 billion. The economy of rural and regional Australia relies upon cattle production with the industry bringing a total value to these communities of \$7.4 billion. Cattle production in remote Australia is becoming less viable as input costs of production increase relative to income earned and the beef industry is keen to transform production methods. Protein is the major limiting nutrient in the Australian rangelands and this proposal will provide new information on how providing protein to cattle during critical periods in their pregnancy can 'program' the body composition of the growing calf to be optimal for the market.

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LP0669470 Dr GE Morris; Dr LG Britcher; A/Prof WM Skinner; Dr J Addai-Mensah; Mr MA De Vos

Approved Project Title **Optimisation of pigment coating surface treatments**

2006 : \$42,500

2007 : \$85,000

2008 : \$85,000

2009 : \$42,500

Primary RFCD 2501 PHYSICAL CHEMISTRY (INCL. STRUCTURAL)

APA(I) Award(s): 1

Partner Organisation(s)

Tiwest Joint Venture

Administering Institution University of South Australia

Project Summary

Control and optimisation of surface coatings in pigment processing will lead to improved production efficiency and quality. In pigment processing, technology developed in this project may not only save millions of dollars in increased production efficiency but also lead to improved pigment optical performance in pigment applications such as paints, plastics and pharmaceuticals.

LP0669518 Prof WT Sarre; A/Prof TJ Prenzler; Mr TC Murphy

Approved Project Title **Private Security and Public Interest: Exploring Private Security Trends and Directions for Reform in the New Era of Plural Policing**

2006 : \$26,000

2007 : \$53,750

2008 : \$57,325

2009 : \$29,575

Primary RFCD 3903 JUSTICE AND LEGAL STUDIES

Partner Organisation(s)

Australian Security Industry Association Limited

Administering Institution University of South Australia

Project Summary

This study will provide the first ever comprehensive assessment of private security and what it can and cannot offer society in terms of fair and effective order maintenance, crime prevention and law enforcement in Australia. Stemming from problems incurred by the sector, the research will address how governments should regulate the growing range of policing functions undertaken by private providers. It will also address the issue of how private police can best satisfy legal and justice criteria, meet the demands of accountability and develop mutually beneficial models of cooperation with the public sector. The research will recommend to policy-makers preferred 'plural' policing models for the 21st century.

LP0669297 Prof DA Scott; Dr FM Arney; Ms CJ Gibson; Dr L Brown

Approved Project Title **Sowing the Seeds of Innovation in the Prevention of Child Abuse and Neglect**

2006 : \$26,500

2007 : \$53,000

2008 : \$26,500

Primary RFCD 3702 SOCIAL WORK

Partner Organisation(s)

UnitingCare Burnside

Administering Institution University of South Australia

Project Summary

The approach developed in this project will have significant benefits for child and family service organisations. It will enhance the spread and sustainability of promising preventive programs within the child and family services sector. In this way, vulnerable children and families will benefit from the increased availability of such programs designed to enhance their life opportunities. The project will also have significant flow-on economic benefits for Local, State and Federal Governments by decreasing the social and economic costs associated with child abuse and neglect.

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LP0669061 Prof RS Smart; Dr J Li; Dr SD Miller; Dr RC Schumann

Approved Project Title Evaluation of reaction mechanisms and products in acid rock drainage treatments

2006 : \$90,075

2007 : \$177,015

2008 : \$167,312

2009 : \$80,372

Primary RFCD 2599 OTHER CHEMICAL SCIENCES

APA(I) Award(s): 1

Partner Organisation(s)

AMIRA International Ltd

Administering Institution University of South Australia

Project Summary

There are more than 54 sites in Australia managing major ARD wastes (either >10% of the waste or >10M tonnes) with another 62 sites with less ARD. At operating sites, the annual costs are \$60M p.a.; over 15 years, a total cost of \$900M for the whole industry. The value of the project outcomes to industry (and government) in reduction of acid and toxic metal release and reduced cost of treatments is potentially in the tens of \$M p.a.. Improvements in environmental and social quality of life in mining areas and towns will also result from improved treatment.